

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

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List*

Claim 1 (Original): An apparatus comprising:

(A) an ND filter which is made to be capable of being inserted into or detached from an optical path, and limits incident light in a case of existing on the optical path;

(B) an iris which limits the incident light; and

(C) a changing device which controls said iris at a first speed in a case that said ND filter is being inserted into the optical path or is being detached from the optical path, and controls said iris at a second speed slower than the first speed in a case that said ND filter is on the optical path or is out of the optical path changes a state of limitation of the incident light by said iris at a first changing speed, said changing device, when a state of limitation of the incident light by said ND filter is changed, changing the state of limitation of the incident light by said iris at a second changing speed different from the first changing speed.

Claim 2 (Original): An apparatus according to claim 1, wherein said changing device, when the state of limitation of the incident light by said ND filter is changed, changes the state of limitation of the incident light by said iris at a speed higher than the first changing speed.

Claim 3 (Original): An apparatus according to claim 1, wherein said apparatus includes an image pickup apparatus.

Claim 4 (Original): An apparatus according to claim 1, wherein said apparatus includes an optical apparatus.

Claim 5 (Original): A control method for a quantity-of-light adjusting apparatus having an iris and an ND filter which is made to be capable of being inserted into and detached from an optical path, and limits incident light in a case of existing on the optical path, said control method comprising:

~~changing a state of limitation of the incident light by said iris at a first changing speed, and, when a state of limitation of the incident light by said ND filter is changed, changing the state of limitation of the incident light by said iris at a second changing speed different from the first changing speed controlling said iris at a first speed in a case that said ND filter is being inserted into the optical path or is being detached from the optical path, and controlling said iris at a second speed slower than the first speed in a case that said ND filter is on the optical path or is out of the optical path.~~

Claims 6-11 (Cancelled).

Claim 12 (Withdrawn): An apparatus comprising:

(A) an ND filter which limits incident light;
(B) a light receiving sensor which receives the incident light; and
(C) a changing device which changes a gain of output of said light receiving sensor at a first changing speed, said changing device, when a state of limitation of the incident light by said ND filter is changed, changing the gain of output of said light receiving sensor at a second changing speed different from the first changing speed.

Claim 13 (Withdrawn): An apparatus according to claim 12, wherein said changing device, when the state of limitation of the incident light by said ND filter is changed, changes the gain of output of said light receiving sensor at a speed higher than the first changing speed.

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Claim 14 (Withdrawn): An apparatus according to claim 12, wherein said apparatus includes an image pickup apparatus.

Claim 15 (Withdrawn): An apparatus according to claim 12, wherein said apparatus includes an optical apparatus.

Claim 16 (Withdrawn): A control method for a quantity-of-light adjusting apparatus having an ND filter which limits incident light and a light receiving sensor which receives the incident light, said control method comprising:

changing a gain of output of said light receiving sensor at a first changing speed, and, when a state of limitation of the incident light by said ND filter is changed, changing the gain of output of said light receiving sensor at a second changing speed different from the first changing speed.

Claim 17 (Withdrawn): A computer program product providing a control program for a quantity-of-light adjusting apparatus having an ND filter which limits incident light and a light receiving sensor which receives the incident light, said computer program product comprising a process of:

changing a gain of output of said light receiving sensor at a first changing speed, and, when a state of limitation of the incident light by said ND filter is changed, changing the gain of output of said light receiving sensor at a second changing speed different from the first changing speed.

Claim 18 (Withdrawn): A computer program product according to claim 17, wherein said computer program product includes a storage medium.

Claim 19 (Withdrawn): An apparatus comprising:

(A) a first changing device which changes a state of limitation of incident light by an ND filter which limits the incident light; and

(B) a second changing device which changes, at a first changing speed, a gain of output of a light receiving sensor which receives the incident light, said second changing device, when the state of limitation of the incident light by said ND filter is changed by said first changing device, changing the gain of output of said light receiving sensor at a second changing speed different from the first changing speed.

Claim 20 (Withdrawn): An apparatus according to claim 19, wherein said second changing device, when the state of limitation of the incident light by said ND filter is changed by said first changing device, changes the gain of output of said light receiving sensor at a speed higher than the first changing speed.

Claim 21 (Withdrawn): An apparatus according to claim 19, wherein said apparatus includes an image pickup apparatus.

Claim 22 (Withdrawn): An apparatus according to claim 19, wherein said apparatus includes an optical apparatus.

Claim 23 (Withdrawn): An optical unit adapted to be mounted on an image pickup apparatus, comprising:

(A) an ND filter which limits incident light; and
(B) a transmission device which transmits color information of said ND filter to said image pickup apparatus.

Claim 24 (Withdrawn): An optical unit according to claim 23, wherein said ND filter is capable of changing a state of limitation of the incident light, and said transmission

device transmits, to said image pickup apparatus, information on the state of limitation of the incident light by said ND filter.

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Claim 25 (Withdrawn): An optical unit according to claim 24, wherein said ND filter is capable of being inserted into and detached from an optical path of said optical unit.

Claim 26 (Withdrawn): An optical unit according to claim 24, wherein said ND filter has a variable density.

Claim 27 (Withdrawn): An optical unit according to claim 24, wherein said ND filter includes an electrochromic element.

Claim 28 (Withdrawn): An optical unit according to claim 23, wherein said optical unit is detachable mounted on said image pickup apparatus.

Claim 29 (Withdrawn): A control method for an optical unit having an ND filter which limits incident light and adapted to be mounted on an image pickup apparatus, said control method comprising:

transmitting color information of said ND filter to said image pickup apparatus.

Claim 30 (Withdrawn): A computer program product providing a control program for an optical unit having an ND filter which limits incident light and adapted to be mounted on an image pickup apparatus, said computer program product comprising a process of:

transmitting color information of said ND filter to said image pickup apparatus.

Claim 31 (Withdrawn): A computer program product according to claim 30, wherein said computer program product includes a storage medium.

Claim 32 (Withdrawn): An image pickup apparatus on which an optical unit having an ND filter which limits incident light is mounted, said image pickup apparatus comprising:

(A) a receiving device which receives color information of said ND filter from said optical unit; and

(B) a correction device which corrects, on the basis of the color information of said ND filter received by said receiving device, white balance of an image taken in through said optical unit.

Claim 33 (Withdrawn): An image pickup apparatus according to claim 32, further comprising:

an image pickup part which converts an optical image taken in through said optical unit into an image signal, said correction device correcting said image signal.

Claim 34 (Withdrawn): A control method for an image pickup apparatus on which an optical unit having an ND filter which limits incident light is mounted, said control method comprising:

receiving color information of said ND filter from said optical unit, and correcting, on the basis of the received color information of said ND filter, white balance of an image taken in through said optical unit.

Claim 35 (Withdrawn): A computer program product providing a control program for an image pickup apparatus on which an optical unit having an ND filter which limits incident light is mounted, said computer program product comprising a process of:

receiving color information of said ND filter from said optical unit, and correcting, on the basis of the received color information of said ND filter, white balance of an image taken in through said optical unit.

Claim 36 (Withdrawn): A computer program product according to claim 35, wherein said computer program product includes a storage medium.

Claim 37 (Withdrawn): An image pickup system comprising:

(A) an optical unit having an ND filter which limits incident light, and a transmission device which transmits color information of said ND filter to an image pickup apparatus; and

(B) said image pickup apparatus having a receiving device which receives color information of said ND filter from said optical unit, and a correction device which corrects, on the basis of the color information of said ND filter received by said receiving device, white balance of an image taken in through said optical unit.

Claim 38 (Withdrawn): A control method for an image pickup system including an optical unit having an ND filter which limits incident light, and an image pickup apparatus on which said optical unit is mounted, said control method comprising:

causing said optical unit to transmit color information of said ND filter to said image pickup apparatus, and causing said image pickup apparatus to receive the color information of said ND filter transmitted from said optical unit and to correct, on the basis of the received color information of said ND filter, white balance of an image taken in through said optical unit.

Claim 39 (Withdrawn): A computer program product providing a control program for an image pickup system including an optical unit having an ND filter which limits incident light, and an image pickup apparatus on which said optical unit is mounted, said computer program product comprising a process of:

causing said optical unit to transmit color information of said ND filter to said image pickup apparatus, and causing said image pickup apparatus to receive the color information of said ND filter transmitted from said optical unit and to correct, on the basis of

the received color information of said ND filter, white balance of an image taken in through said optical unit.

Claim 40 (Withdrawn): A computer program product according to claim 39, wherein said computer program product includes a storage medium.

Claims 41-53 (Cancelled).

Claim 54 (Withdrawn): An apparatus comprising:

(A) an ND filter which limits incident light;
(B) a light receiving sensor which receives the incident light; and
(C) a control device which determines an operating state of said ND filter, and controls a gain of output of said light receiving sensor according to a result of the determination.

Claim 55 (Withdrawn): An apparatus according to claim 54, wherein said control device determines the operating state of said ND filter according to an operating position of said ND filter.

Claim 56 (Withdrawn): An apparatus according to claim 54, wherein said control device controls the gain of output of said light receiving sensor in such a way as to cancel a change of an amount of limitation of the incident light by said ND filter with a change of the gain of output of said light receiving sensor.

Claim 57 (Withdrawn): An apparatus according to claim 54, wherein said apparatus includes an image pickup apparatus.

Claim 58 (Withdrawn): An apparatus according to claim 54, wherein said apparatus includes an optical apparatus.

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Claim 59 (Withdrawn): A control method for a quantity-of-light adjusting apparatus having an ND filter which limits incident light and a light receiving sensor which receives the incident light, said control method comprising:

determining an operating state of said ND filter, and controlling a gain of output of said light receiving sensor according to a result of the determination.

Claim 60 (Withdrawn): A computer program product providing a control program for a quantity-of-light adjusting apparatus having an ND filter which limits incident light and a light receiving sensor which receives the incident light, said computer program product comprising a process of:

determining an operating state of said ND filter, and controlling a gain of output of said light receiving sensor according to a result of the determination.

Claim 61 (Withdrawn): A computer program product according to claim 60, wherein said computer program product includes a storage medium.

Claim 62 (Withdrawn): An apparatus comprising:

(A) a determining device which determines an operating state of an ND filter which limits incident light; and

(B) a control device which controls a gain of output of a light receiving sensor which receives the incident light, according to the result of the determination provided by said determining device.

Claim 63 (Withdrawn): An apparatus according to claim 62, wherein said determining device determines the operating state of said ND filter according to an operating position of said ND filter.

Claim 64 (Withdrawn): An apparatus according to claim 62, wherein said control device controls the gain of output of said light receiving sensor in such a way as to cancel a change of an amount of limitation of the incident light by said ND filter with a change of the gain of output of said light receiving sensor.

Claim 65 (Withdrawn): An apparatus according to claim 62, wherein said apparatus includes an image pickup apparatus.

Claim 66 (Withdrawn): An apparatus according to claim 62, wherein said apparatus includes an optical apparatus.

Claims 67-81 (Cancelled).